

SEMESTER – V

Sno	Course	Total Marks	Mid Sem Exam*	Sem End Exam	Teaching Hours	Credits
1	Foundation Course Subject Seminar	50	0	50	2	2
2	Industry Orientation	50	0	50	3	2
3	Game Design Theory	50	0	50	2	2
3	Game Design Lab	100	25	75	4	4
4	Compositing-II	50	0	50	3	2
5	Compositing-II Lab	100	25	75	4	3
6	Advanced 3D	50	0	50	2	2
7	Advanced 3D- Lab	100	25	75	4	3
8	Mini Project	100	25	75	4	4
Total		650	100	550	28	24

SEMESTER – V

INDUSTRY ORIENTAION

Unit – I: Management: concept and scope, Principles of management, Theories of management

□ Finance management, New trends in management Media Management: concept, need and scope, Operations and structure of news media companies, Media business and new technology, New trends in media business, Legal issues in media business Nature and Scope of Marketing Research in relation to:- , Graphic designing, Animation Industry (TV advt Film and animated film) ,Challenge in Business Market, Market surveys, planning Significance of Research, Marketing Research Process,

Unit – II: Fundamentals concepts Research Designs, objectives & hypothesis Data Collection Market, Geomorphic Distribution-Segments, Introduction to media management: basic management principles, Managerial skills in visual media production, and promotion; Market for visual media products; market analysis and meeting the demand. Online marketing, mob sourcing.

Unit - III: Media production planning: production objectives/goals; Mobilizing human resources – production crew and cast, contracts and call sheets; Acquiring/hiring equipment and properties; Booking studio floor and time, mounting sets, Out-door shoot planning – location search, suitability of locations; Seeking permission from legal and official bodies; Production schedules; logistics management; time management.

Unit -IV: Film festivals & Film marketing. Financial management in visual media production; Budgeting basics, Budgeting for preproduction, production, Post production activities; Mobilizing financial resources; cost cutting measures. Cash flow. Marketing of various rights.

Unit –V: Visual media laws: The Cinematograph Act 1952 and later amendments, Cable TV network Regulation Act; Broadcasting codes in India (Doordarshan); Cinematography Certification Rules 1983; Copyright laws; Limits of fair use; Video piracy; Cyber crime and cyber laws; Current copyright debates over such issues as file sharing, the on-line video, and remix culture.

Reference:

1. Media Production by Amanda Willett
2. Administrative Theories and Management Thought Paperback – 2013 by Sapru R.K
(Author)
3. Human Resource Management Paperback – 1 Jan 2010 by B.B. Mahapatro (Author)

GAME DESIGN (Theory)

Unit -I: Game industry and technology Global game industry ,Indian game industry, Production pipelines, software used ,formats, Documentations, Platforms, Business, Xbox live, steam, PSN network, app store.

Unit -II: Principles of Game Design Elements of games, Aesthetics, Game play Mechanics, Story, Technology, Theme, Principles of game design, Pacing, Game flow

Unit -III: Critical study How to generate Ideas for games, Iterations, Pilot study based on the context, Visual Presentations, High Concept Document

Unit -IV: UI Design Virtual interface, Physical interface, Design based on deployment, Flowcharts

Unit -V: Interactive story telling Methods of interactive storytelling, Advantages and disadvantages, Three act structure, Hero's journey,

References:

1. Art of game design by jessy shell
2. Theory of fun Raph Koster

GAME DESIGN (Lab)

Project#1: Game Design Document

Specifications, over view, Game play and mechanics, In Game objects, Game Flow, In game item mechanics, Level design and Environment, Asset list, Peripheral features.

Project#2: Physical Game Creation

Create a game based on give theme and physical constraints, Exhibit the game and take feedback from target audience

COMPOSITING - II (Theory)

Unit –I: Introduction to Nuke User Interface, menu bar, tool bar, pane, tab, viewer, node graph, curve editor, properties bin, progress bars, script editor, UI Customization, split pane, moving tabs & floating bins, preferences, save & restore custom UI layouts & reset to manufacturer default layouts, Organization of Tools in Nuke, tool groups / node types / node indicators, multiple views & multiple viewers, viewer-only controls, play controls, Basic Compositing Workflow in Nuke, auto-save, Project Settings, Read & Write nodes – Nuke file name variables, file formats, color space in Nuke, color space LUT & viewer LUT, Reformat, adding / deleting / connecting / finding nodes, Merge, Properties Bin & Control Panel controls Multi-channel Workflow, reading & writing multi-channel EXR, working with multi-channel images, separating & combining channels, hard cache, Where to Find Supporting Resources for Nuke?, from The Foundry other online resources, Transforming, control overlay vs. control panel, key framing, Curve Editor, Crop.

Unit –II: Warping & Morphing, Color Manipulation, Color Correct / Grade / Hue Correct / Histogram, matching grade, Keying, luminance key / chroma key / difference key, Primatte, Keylight, image based keyer – IBK, color spill treatment, Rotoscoping, Roto Paint tools & controls, rotoscoping with Roto Paint, Tracking, 1&4 point tracking / off screen tracking, tracking data modification, application of tracking data beyond stabilization, corner-pinning, Precomp, Motion Blur,

Unit –III: Gizmo, making a Gizmo, exporting & using a Gizmo, 3D Workspace, 2D vs 3D compositing, card / obj / camera / light / scene, basic 3D compositing setup, Scanline Render, basic setup for camera projection Displace Geo & its applications, Stereoscopic (multi-view) Compositing, Project Setting for stereo projects, reading & writing stereo images, stereo workflow, disparity map, common problems with stereo footages, Ocular demo – plug-ins for solving the problems of stereo footages, Lens Distortion , 3 methods to perform lens distortion analysis, applications of the result from lens distortion analysis, 3D Camera Tracker, operations & applications, built-in lens distortion analysis tool

Unit –IV: Planar tracking - the lynchpin to mocha. Fast mask creation, inserts and even 3D camera tracking are impossible without solid tracking data. Tougher tracks, Stabilization, Skin retouch , Camera Tracking Roto tips & tricks in mocha, 3D camera solve, Removing lens flare, Techniques for removal and background patching.

Unit- V: The user interface, project overview, shot overview, 3d perspective and orthographic view, Useful Keys, Menus, tracking menu, camera menu, Import footage, Tracking Parameters, Color key, Clean Auto Feature Tracks, Survey Data, Camera Parameters, Solver Controls, Lens distortion, Depth Map, Importing footage, Footage format, footage properties, camera parameters, Auto feature tracking, Tracking length graph(Track-L), Tracking Error Graph(Track – E), Editing feature track F- Curves, creating masks, tracking masks, image masks, solving camera motion, constraints, survey data

Reference

1. Nuke 101: Professional Compositing and Visual Effects Book by Ron Ganbar
2. The VES Handbook of Visual Effects: Industry Standard VFX Practices and Procedures by Susan Zwerman (Editor), Jeffrey A. Okun (Editor)
3. Digital Compositing with Nuke by Lee Lanier (Author)
4. The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics (The Morgan Kaufmann Series in Computer Graphics) by Ron Brinkmann (Author)

COMPOSITING – II (Lab)

Project#1: Working with nodes

Project#2: Working with Rotoscopy

Project#3: Motion Tracking

Project#4: 2D Match moving

Project#5: Digital Matte Painting VFX

Project#6: 2D Compositing in live-action Short

Project#7: 3D Camera Solver roto software

Project#8: Roto the human character

Project#9: Planar Tracking and stabilizing

Project#10: Hair Rotoscoping in Roto software

Project#11: Stereo roto in Roto software

Project#12: Tracking and roto tracking software

Project#13: Remove object in compositing software

Project#14: Multipass compositing in compositing software

Advanced 3D (Theory)

Unit - I: Introduction to bone system/Joints and IK handles, Creating bone system and maintaining naming conventions, Skinning types, import and export of skin weights, IK and FK basics, IK and FK switch, Introduction to Deformers, Introduction to constraints and implementation to rig. Maintaining proper hierarchy, grouping and creating controls, rigging the characters, Use of deformers in rigging process.

Unit –II: Brief about animation principles, Animation tools in 3D, "Applying classical 2D animation techniques i.e; Stretch squash for 3D character". Creating the illusion of weight, Overview of Maya's playback controls, and Exploring Maya's animation preferences. Details about graph editor, Bouncing Ball Exercise, Body language. Animating object along a motion path, Utilizing the tracks-editor to blend animation clips. Controlling attributes with set driven keys, Animating with constraints,

Unit –III: Previewing animations in real-time with play blasts, Introduction to scene animation and key framing, dope sheet. Animal walk& run cycles, snakes and birds. Biped Character walk cycles, Biped Character run cycles, pushing and pulling objects. Facial animation and lip-sync. Nonlinear Animation with trax editor. Working with character sets and clips. character interactions.

Unit –IV: Rendering Overview, What is rendering, How Maya renders Shader Networks, Shading Groups, Materials, Lights, Maya architecture, Nodes and Attributes, Hyper Graph,IPR (Interactive Photo realistic Rendering),V-Ray techniques, Mental ray Techniques,

Unit –V: Introduction to nCloth, Use of mesh as nCloth, Optimizing geometry for nCloth, Setting nCloth collisions and constraints, ncloth and external dynamic forces. Various ncloth simulations, ncloth caches creating and editing, nCloth caches attributes Optimizing ncloth, n-Cloth examples Introduction to Hair, Hair styling, Painting and setting positions for hair follicles, Assigning hair system, Making collisions and use of constraints. Introduction to Fur system in maya, assigning fur, defining various fur attributes like fur maps, reversing normals etc. Shadow and render settings of fur. Introduction to nParticles and particles in maya, different kind of emitters, particles attribute, collision of particles with other objects, various fields, particle shapes and dynamic, particle instance, particle collision event editor, effects. Soft and rigid bodies, active and passive rigid bodies, dynamic attributes of soft and rigid bodies, pin constraint, hinge constraint, spring constraint, paint soft body weight tool.

Reference:

1. Character Emotion in 2D and 3D Animation Book by Les Pardew
2. Introducing Character Animation with Blender Book by Tony Mullen
3. Mastering 3D Animation Book by Peter Ratner
4. The Art of 3D Computer Animation and Effects Book by Isaac Victor Kerlow
5. 3D Animation Essentials Book by Andy Beane
6. Animation Methods - Rigging Made Easy: Rig Your First 3D ...

7. 3D game animation for dummies Book by Kelly Murdock

ADVANCED 3D (Lab)

Project#1 Create rigs for all models.

Project#2 Make an animation of a character walking in street he pick up some object and throw it.

Project#3 Make various expressions of models and use them for blend shapes.

Project#4 Make different kinds of biped walk (Happy, Sad, Attitude and Tiptop)

Project#5 Mechanical rig, Vehicle rig

Project#6 Rigging various props

Project#7 Create run, jump, skid animations. Stair up and stair down.

Project#8 Make animations of coin drop, ball bounce, path animation,

Project#9 Render a frame and video of indoor and outdoor scenes.

Project#10 Render a photorealistic output of an interior scene.

Project#11 Render a natural scene show different time by varying lighting.

Project#12 Advance lighting using mental ray render.

Project#13 Animate day and night scene of a street with the help of lighting.

Fundamentals of Dynamics

Project#14 Create a hair system on male or female model

Project#15 Apply fur on a dog or cat model

Project#16 Create a scene with waterfall or fountain

Project#17 Apply active/passive soft and rigid bodies.

Project#18 Create a scene of camp fire followed by rainfall/snowfall

Project#19 Create an animation of a non living object.

MINI PROJECT

Students should create an animation not less than three minutes excluding titles using any of the following methods for their animation project,

- Full 2D Animation
- Full 3D Animation
- Full Stop-motion Animation
- 2D Animation + 3D Animation
- 3D Animation + Stop-motion Animation
- 2D Animation + Stop-motion Animation
- 2D Animation + Visual Effects
- 3D Animation + Visual Effects
- Stop-motion Animation + Visual Effects
- 2D Animation + 3D Animation + Visual Effects
- 3D Animation + Stop-motion Animation + Visual Effects
- 2D Animation + Stop-motion Animation + Visual Effects
- Live Action + Animation

Topography digital wall paper, any product/service concept art work, any social awareness concept advertisement, Caricatures and cartoons according present political scenario

Project should be worked out through various production stages after the final approval by the supervising faculty.

Students have to complete the final project within the given time period. Student should keep all the important paper works (script, storyboard and character designs) along with them. Viva Voce is part of the examination.

SEMESTER – VI

Sno	Course	Total Marks	Mid Sem Exam*	Sem End Exam	Teaching Hours	Credits
1	Case Study (Animation / VFX/ Game)	50	0	50	4	3
2	Internship	100	0	100	4	3
3	Internship Document	100	0	100	4	3
4	Project / Portfolio	200	0	200	8	8
5	Exhibition / Show Case	200	0	200	8	7
Total		650	0	650	28	24

SEMESTER – VI

**CASE STUDY
(ANIMATION / VFX/ GAME)**

1. What Is A Case Study
2. Different Types of Case Studies
3. Planning A Case Study
4. Researching A Case Study
5. Strengths and Weaknesses of Case Studies
6. Writing A Case Study
7. Case Studies in Marketing
8. Using Case Studies in Medicine and other Fields
9. Case Studies In The Workplace
10. Case Studies In Education
11. Case Studies in Animation/VFX/Game
12. Summarizing Case Studies

Students have to present seminar on any Animation/VFX/Game. The title of the film will be approved by the College. Students will have to submit the case study of Film to the concerned teacher at least two weeks prior to the Seminar .The seminar & case study report will be evaluated by the Committee of two teachers nominated by the Director of the College.

INTERNSHIP & INTERNSHIP DOCUMENTATION

- To acquire practical industry based experience. Internship is on the job training to assimilate the professionalism in a career. Internships offer students a period of practical experience in the industry relating to their field of study.
- The students will have to undergo an Internship at an animation studio or a post-production visual effect studio as per the field of specialization of the candidate for a month either at the end of the fifth semester or the beginning of the sixth semester.
- The students would prepare individual reports after the Internship and the same should be attested by the organization under which the student did the internship. The students' comprehensive report will be submitted to the HOD for evaluation. A faculty member will monitor the students during the internship.
- The internships would have a credit of 1 with 100 marks and the marks would be submitted to the university at the end of the six semester.

PROJECT / PORTFOLIO

(DEMO REEL PRESENTATION)

- Preparing for an interview -Research the organization, Compare your skills and qualifications to the job requirements, Prepare responses, Plan what to wear, Plan what to bring, Pay attention to nonverbal communication, Follow up. How to write a successful Media CV?
- What is a demo reel? Tips to create a successful demo reel -Keep it short, Make it specific, Choose a style -Collage or samples, Put your best work first, Your work only, Slate it - Include contact details at the start or the end of the demo reel, Showcase your involvement, Highlight impressive clients, Emphasis technical ability -Before and after shots of their work, Be mindful of aspect ratios, Say “No” to copyrighted music, Cut to the beat, Don’t repeat footage, Quality control, Online all the time, DVDs for delivery, Label with contact info, Active and accessible, Show your personality, Ask a critic
- Discuss the importance of self-promotion. Getting visibility -YouTube, Vimeo, Face book, Blogs, Web page, Business cards, Job portals etc.

Reference

1. Interview: How to Master Interviews and Stand Out Among Your Peers: Stefan Anderson
2. Success in Interview: Anand Ganguly

EXHIBITION

Aim:

- To explore the creativity of the students to exhibit their talents in exhibition to the college, placement companies and public to get self confidence in the students.
- Self analysis of their talents given remarks of the visitors and development creativity in their creative career.
- Participating in exhibition and getting participation certificate getting more rewards in media placements companies.

Category of exhibitions:

- 1) Print Media:
 - Social Awareness concept artworks exhibition
 - Digital artwork illustrations exhibition
 - Digital Artwork & Drawing artworks
 - Typography exhibition
 - Clay modeling, sculpture & Craft works
 - Digital art Photography exhibition
- 2) Short Film and One Minute Short Film Exhibition
- 3) VFX and Special Effects.

Methodology:

Students has to come different ideas and it leads to Creative Professionals in the media and learn latest trends in media.